## DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 99.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-022546 Address: 333 Burma Road **Date Inspected:** 08-Nov-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC) Chanxing Island **Location:** Shanghai, China

**CWI Name:** Mr. AN OIANG XING **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component: OBG Segment** 

# **Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance (QA) Inspector Santhosh Ramakrishna Pillai was present during the times noted above for observations relative to fabrication work of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China.

This QA inspector randomly observed the following work:

### 1. INPROCESS:

Orthotropic Box Girder (OBG) at Trial Assembly Area:

ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) of Complete Joint Penetration (CJP) welds joining the deck plate to deck plate transverse splice weld joint located on 11CE+11DE at cross beam side. The weld is designated as OBE11A-002. The welder is identified as 067752. ZPMC QC Mr. AN QING XING was onsite monitoring the welding variables. The inprocess SMAW appears to be progressing in compliance with WPS-B-P-2214-B-U2-FCM-1.

ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) of Complete Joint Penetration (CJP) welds joining the deck plate to deck plate transverse splice weld joint located on 11CE+11DE at cross beam side. The weld is designated as OBE11A-004. The welder is identified as 040320. ZPMC QC Mr. AN QING XING was

# WELDING INSPECTION REPORT

(Continued Page 2 of 2)

onsite monitoring the welding variables. The inprocess SMAW appears to be progressing in compliance with WPS-B-P-2214-B-U2-FCM-1.

ZPMC welding personnel performing Flux Core Arc Welding (FCAW) of Fillet welds joining the T-Rib to side plate hold back weld joint located on west side of 11EW at cross beam side. The weld is designated as SP746-001-001. The welder is identified as 049220. ZPMC QC Mr. ZHU YUAN YUAN was onsite monitoring the welding variables. The inprocess FCAW appears to be progressing in compliance with WPS-B-T-2132.

ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) of Complete Joint Penetration (CJP) welds joining the bottom plate to bottom plate transverse splice weld joint located on 11CE+11DE. The weld is designated as OBE11C-003. The welder is identified as 040484 & 053871. ZPMC QC Mr. AN QING XING was onsite monitoring the welding variables. The inprocess SMAW appears to be progressing in compliance with WPS-B-P-2214-B-U2-FCM-1.

ZPMC personnel heat straightening Orthotropic Box Girder (OBG) member identified as longitudinal diaphragm located on 11BE+11CE at cross beam side. Distortion appeared to be caused by welding. ZPMC Quality Control (QC) inspector identified as Mr. WANG LI YANG was present to monitor the heat straightening process. The heat straightening appear to comply with Heat Straightening Report number is HSR1-9807.

### 2. NDT:

Ultrasonic Testing (UT) (A, B, C and D-Scan):

UT carried out as per the ABF submitted UT Report No UT-11W-055 R1.

This QA Inspector performed Ultrasonic testing (UT) 10 % of the area that has been previously tested and accepted by ABF Quality control personnel. This QA inspector generated a UT (TL-6027) report on this date. The members are identified as portion butt joint between bottom plate to side plate hold weld located on 11BW+11CW at counter weight side. According to rejection criteria of "D" Scan procedure that Caltrans QA did not find any Rejected indication at scanning area. The Weld Designation is as follows: SEG069A-013(11CW).

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

## **Summary of Conversations:**

No relevant conversations were reported on this date.

### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Pillai,Santosh	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer